

## **Uranium Mining Studies by EPA's Office of Radiation and Indoor Air**

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EPA's Radiation Protection Division works to address hazards posed by technologically enhanced, naturally occurring radioactive materials (TENORM). This poster session will provide information on EPA's TENORM strategy and its findings related to unreclaimed uranium mines in the western United States. As one part of EPA's efforts to characterize risk from TENORM sources and to identify where TENORM problems exist, we have been investigating the potential environmental hazards of abandoned uranium mines in the western United States.

We have compiled mine location information from federal, state, and tribal agency partners to develop a geographic information system (GIS) database platform, which has also been shared with our partnering agencies for their own uses. That GIS has been coupled with field studies to develop mine characterization profiles and to examine their potential for creating health hazards. Most uranium mines were located in Colorado, Utah, Wyoming, New Mexico and Arizona, and are typically on federal and tribal lands. Some watersheds have, or have had, over 100 uranium mines located within them. Two mines are on the NPL, while others are on CERCLIS.

Our findings indicate that the primary exposure scenarios involve tribal populations living near unreclaimed uranium mines, recreational users and possibly workers from federal land management agencies (e.g., BLM). In addition to radioactive contaminants, non-radioactive heavy metal contamination may occur at many of the mines, potentially increasing the hazards from unreclaimed uranium mines. The analyses will be used in Agency technical reports and for stakeholder meetings to determine next steps in addressing these hazards.